

AST251 Project 3 – Evaluating Claims of Extraterrestrial Messaging xerrilog Planet 2

Tuesday 28th May, 2080

We have identified what may be an indication of extraterrestrial intelligence, as well as the planet where it may have originated. This document summarizes the information gathered so far about the candidate message and its candidate planet of origin.

Potential evidence for extraterrestrial intelligence

Astronomers have detected a broadband radio transmission that appears to have originated from this planet's solar system. The transmission is believed to contain an image and is displayed below with the most likely aspect ratio. The transmission is continuous and does not repeat itself frequently. An excerpt of the transmission is shown below:

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01101100101101001000001000101111111000011011111001010000  
011001011000100111011100111001100000100000100101101001101  
1000110111010000101100101010101011001111110100101011001  
0000011001110110101010011001000011001110011011101010111  
100101100011100010011010110101001000000101101111111001100
```

This signal was first noticed at UTC 2080-03-01/01:27.

Parameters of the candidate planet of origin and its host star

Spectral Type	M
Stellar Luminosity (Solar Units)	0.00236
Stellar Mass (Solar Masses)	0.187
Distance to Star (lightyears)	95.4
Planet Mass (Earth masses)	1.2
Atmospheric Pressure (atm)	1.7

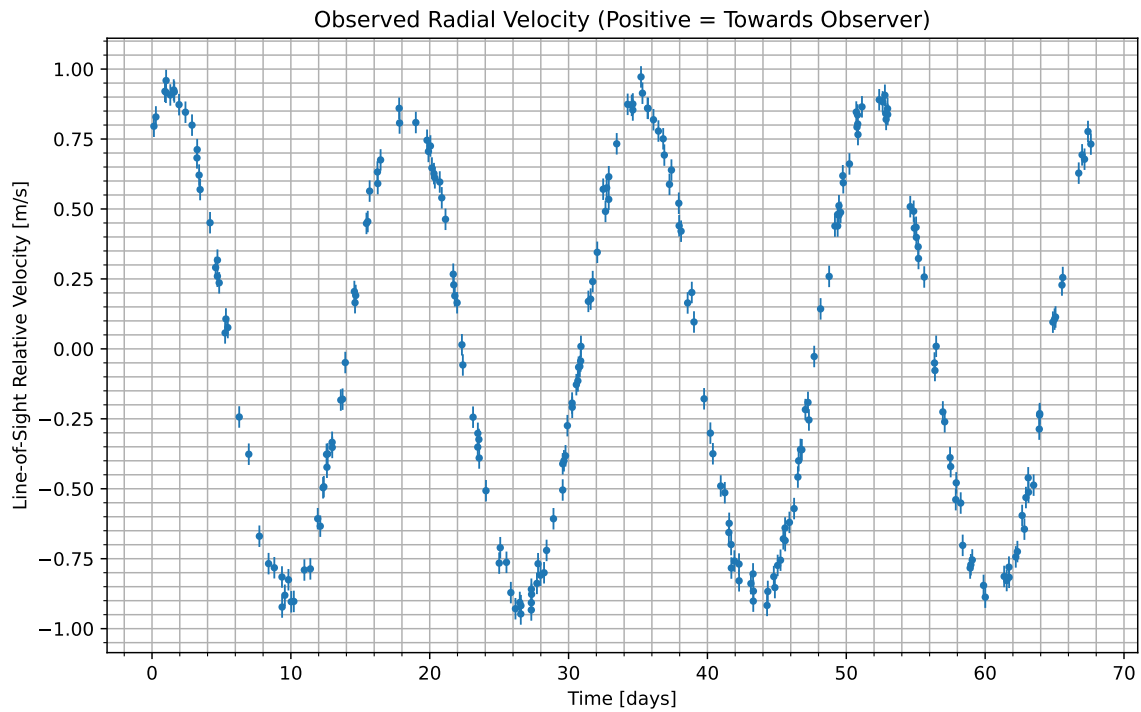


Figure 1: We have isolated the radial velocity of the host star due to the candidate planet. Data begins at UTC 2080-03-03/17:50. Positive values indicate the velocity at which the star is moving towards us; negative indicate the velocity at which it is moving away.

Atmospheric composition of the candidate planet (percent by volume)

Molecule	Concentration
N_2	10.1
CO_2	66.6
H_2O	23.3

Gas Abundance (percent by volume)

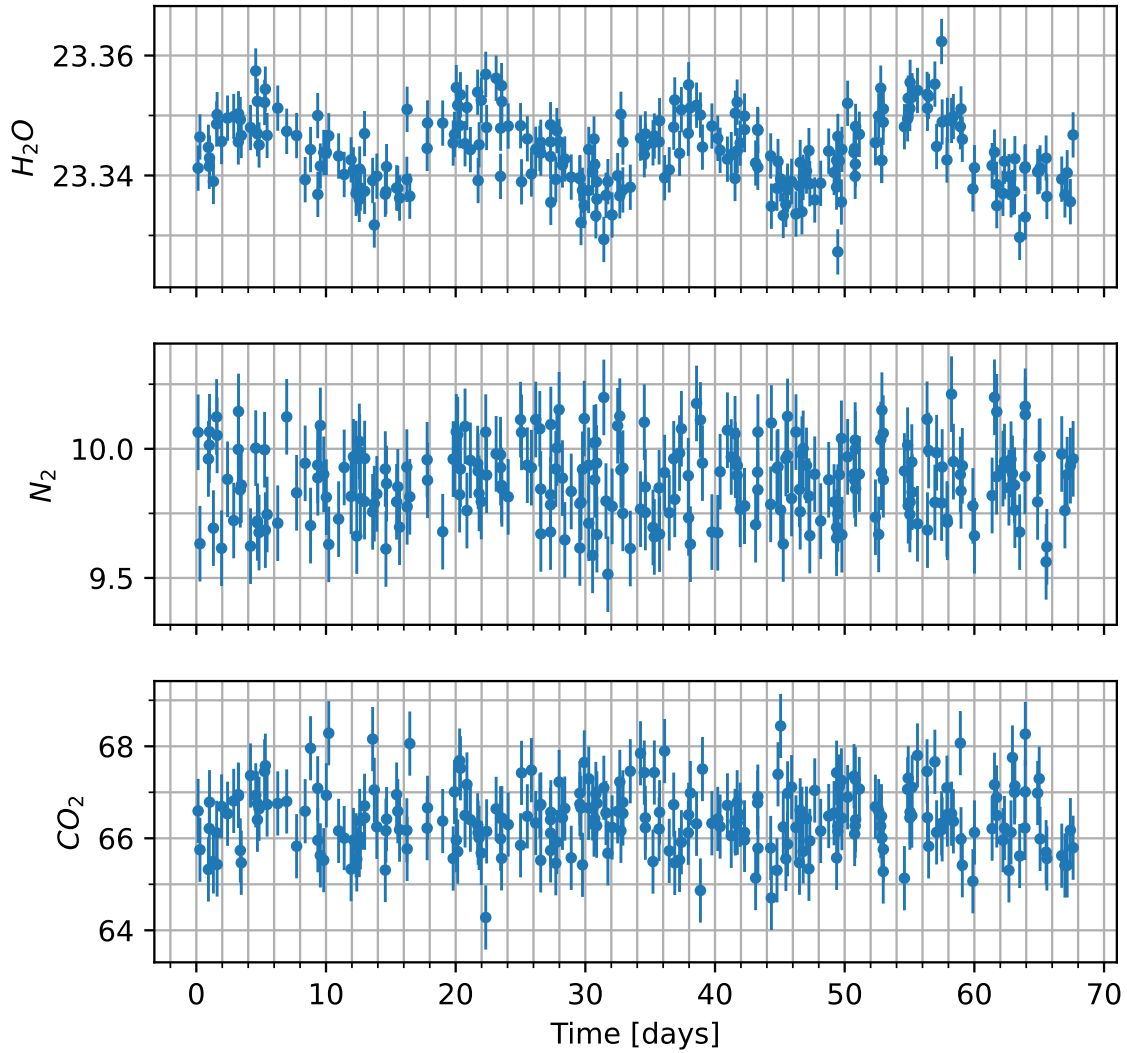


Figure 2: Concentration of various gases in the atmosphere of the candidate planet versus time. Note that the y-axis will usually only show the variation multiplied by some factor, shown in the upper left, and then added to some normal amount, also in the upper-left.

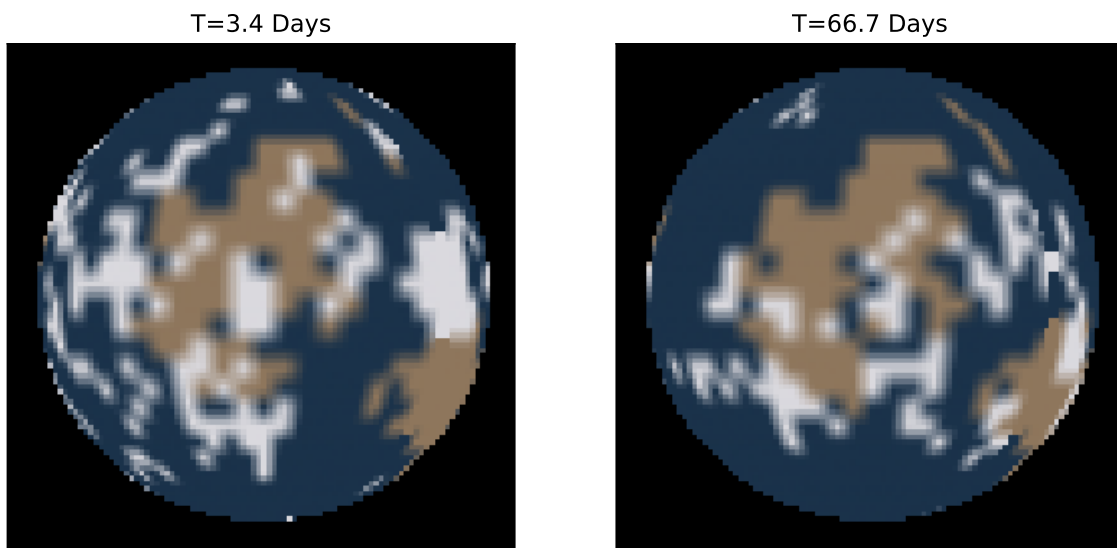


Figure 3: Maps of the surface of the candidate planet taken at two different times. Times are indicated above each image relative to the times shown in the radial velocity curve. Those maps are shown here. Tan areas indicate what we believe to be land, while blue-ish areas indicate what we believe to be liquid regions of some kind. Other colors present reflect the visible color as best as we are able to measure.